

# SUBJECT INDEX

## A

N-Acetylgalactosaminol  
oligosaccharide isolation and,  
7

Acquired immune deficiency  
syndrome

B cell neoplasia in

Epstein-Barr virus and, 87

Adenosine deaminase de-  
ficiency, 581

gene therapy for, 584-91

Adenovirus

gene transfer and, 581

MHC class I antigens and,  
369-71

Adenovirus-2

lymphokines and, 421

Adenyl cyclase

IgG Fc receptor and, 269

Agammaglobulinemia

gene therapy and, 592

Aging

autoantibodies and, 327-28

Aldosteronism

primary

renal kallikrein secretion  
and, 60

ALIGN program, 390-92

Allograft tolerance

veto cells and, 127-30

Alpha transforming growth

factor

melanoma cells and, 289

Amino acid sequencing

complement component C1

inhibitor and, 598-602

lymphotoxin and, 409-12

Anaphylaxis

nonprecipitating antibodies  
and, 538-39

Androgens

hereditary angioneurotic ede-  
ma and, 611-12, 616-17

Angioedema

hereditary

kinins and, 69-70

Antibodies

amino acid composition anal-  
yses of variability plots  
of, 13-16

anti-acetylcholine receptor,  
340, 343

anti-collagen

rheumatoid arthritis and,  
345

antilysozyme, 560-61

anti-thyroglobulin, 340

autoantigens and, 346-48

B cells and, 485

genetic engineering of, 573

melanoma-associated gang-  
liosides and, 288-89

monoclonal

autoimmune thyroiditis and,  
329

human, 11-13

IgG Fc receptors and, 251-  
53, 257-59

melanoma antigens and,  
284

melanoma immunodiagnosis  
and, 295-97

melanoma immunotherapy  
and, 297-98

tumor-specific, 473-74

nonprecipitating, 535-52

physiologic role of, 548-50

preparation of, 536-37

production of, 541-43

properties of, 537-41

specificity of

applications of, 572-73

three-dimensional structure of,  
555-74

Antibody-dependent cellular

cytotoxicity

IgG Fc receptors and, 254-55,  
262-63

thioglycolate-elicited mac-  
rophages and, 266

alpha-1-Antichymotrypsin

structure of, 599-602

Antigen-antibody complexes,  
559-60

Antigen-antibody reactions

complement system and, 85

Antigenic determinants

mapping of, 569-70

Antigenic drift

parasites and, 140

Antigenicity, 570-71

Antigen receptors

protein kinase C and, 500

T cell, 311-12

allelic exclusion of, 312-13

intrathymic acquisition of,  
318

Antigens

autoantibodies and, 348-50

differentiation

melanoma cells and, 292

Thy-1, 382

elastase/T

SV40 T antigens and, 31-  
32

expression of

lymphotoxin and, 419-20

HLA class II

melanoma cells and, 290-  
91

insulin/T

SV40 T antigens and, 31

lentiviral disease and, 139-  
56

melanoma, 283-300

immunodiagnosis and, 295-  
97

immunologic/biologic

characterization of,  
284-92

melanoma immunotherapy  
and, 297-98

MHC class I, 359-74

experimental tumors and,  
371-72

expression of, 363-66

human tumors and, 372-73

lymphotoxin and, 419-20

tumor cells and, 362-63,  
366-71

MHC class II

lymphotoxin and, 420

nonprecipitating antibodies  
and, 543-48

pigmentation-associated

melanoma cells and, 291

SV40 T

oncogenic potential of, 29-  
30

tissue-specific regulators of,  
31-32

T cell receptors for, 629-30

MHC molecules and, 360-  
62

tumor-specific, 465-80

diversity of, 467-71

human tumors and, 479-80

malignancy and, 471-72

methylcholanthrene-induced

sarcoma and, 475-76

ultraviolet light-induced

skin tumor 1591 and,  
476-79

in vitro probes and, 472-74

Antigen specificity

thymocyte selection and, 319-  
20

Antilysozyme antibodies, 560-61

Antiplasmin

plasmin and, 56

alpha-2-Antiplasmin

plasmin and, 608-9

Antipolysaccharides, 10-11

Antithrombin III

chromosome 1 and, 602

coagulation factors and, 56

- Antitrypsin  
 coagulation factor XIa and, 56
- alpha-1-Antitrypsin  
 function of, 604  
 structure of, 599-602  
 synthesis of, 603
- Aplastic anemia  
 $\gamma$ -interferon and, 453
- Apolipoprotein B-100  
 kallikrein and, 61
- Arachidonate  
 glycosylation enhancing factor and, 525
- Arachidonic acid  
 immune complex-stimulated macrophages and, 267-68
- Arachidonic acid metabolism  
 kinins and, 49, 57
- Arthus reaction  
 nonprecipitating antibodies and, 538-39
- Asthma  
 anti-idiotypic antibodies and, 343  
 kinins and, 69
- Astrogloma cells  
 interleukin-1 and, 493
- Atopic dermatitis  
 hyper-IgE syndrome and, 515
- Atrial natriuretic factor  
 kallikrein and, 61
- Atriopeptinogen  
 exogenous tissue kallikrein and, 61
- Autoantibodies  
 binding of, 345-46  
   foreign antigens and, 348-50  
   self-antigens and, 350-52  
 idiotypic cross-reactivity of, 340-45  
 Ly-1 expressing B cells and, 208-13  
 V genes encoding, 327-53  
   organization and structure of, 329-32  
   polymorphism of, 336-40  
   preferential utilization of, 332-36
- Autoantigens  
 antibodies binding to, 346-48
- Autoimmune disease  
 aging and, 328  
 autoantibodies and, 327, 345-36  
 B cell stimulatory factor-2 and, 501-2  
 Epstein-Barr virus and, 87  
 hypergammaglobulinemia and, 329  
 IgG Fc receptors and, 251  
 Ly-1 expressing B cells and, 208  
 lymphotoxin and, 430  
 self-antigens and, 343-45  
 T helper:T suppressor ratio in, 328
- Autoimmune hemolytic anemia  
 autoantibodies and, 327
- Autoimmune neutropenia  
 NA1/NA2-specific antibody and, 258
- Autoimmune thyroiditis  
 autoantibodies and, 327  
 monoclonal antibodies and, 329
- Axinella*  
 lectins of, 10
- Azatadine  
 mast cell mediator release and, 67
- B
- Bacteria  
 persistence of  
   antigenic drift and, 140
- Bacterial endotoxins  
 interleukin-1 production and, 450
- Bandeiraea simplicifolia*  
 lectins of, 10
- Bare lymphocyte syndrome  
 gene therapy and, 592
- Basal cell carcinoma  
 MHC class I antigens and, 372
- B cell growth factor  
 immunoglobulin induction in B cells and, 487
- B cell growth factor-I, 494
- B cell growth factor-II, 496-98
- B cells  
 antibodies and, 485  
 complement receptor type 2 and, 95-97  
 differentiation of  
   interleukin-6 and, 486-88  
 Epstein-Barr virus and, 86-87  
 IgE-binding factors and, 519-22  
 IgG Fc receptors on, 255  
   intrinsic defects in  
     autoimmune disease and, 329  
 Leu-1 expressing, 198-99  
 Ly-1 expressing, 198-204  
 autoantibody and, 208-13  
 phenotypic characteristics of, 207-8  
 tumorigenesis and, 204-6  
 malignant  
   CD5 expression on, 197-202
- molecular regulation of, 485-506
- neuroleukin and, 494
- severe combined immune deficiency and, 586
- B cell stimulatory factor-1, 494-96  
 cDNA for, 496  
 immediate-type hypersensitivity and, 502-3  
 TH2-type T cell clones and, 446
- B cell stimulatory factor-1 receptor, 499-500
- B cell stimulatory factor-2  
 autoimmune disease and, 501-2  
 B cell differentiation and, 486-88  
 cDNA for  
   cloning of, 488-90  
 pleiotropic functions of, 492-94  
 recombinant  
   B cell responses and, 490-92
- B cell stimulatory factor-2 gene induction of, 444
- B cell stimulatory factor-2 receptor, 498-99
- Beta transforming growth factor  
 melanoma cells and, 289
- Bladder cancer  
 B cell stimulatory factor-2 and, 501
- Blood groups  
 II system of, 8
- Blood pressure  
 Hageman factor and, 58
- Bone marrow transplantation  
 adenosine deaminase deficiency and, 586
- Bovine pancreatic trypsin inhibitor  
 kallikrein and, 62
- Bovine papillomavirus  
 gene transfer and, 27, 582  
 oncogenic potential of, 32-33
- Bradykinin, 49  
 endotoxic shock and, 70  
 formation of, 50  
 glycosylation enhancing factor activity and, 524  
 hereditary angioedema and, 69-70  
 physiologic responses to, 57  
 rhinitis and, 65-68
- Brain tumor  
 human papovaviruses and, 32
- Bronchitis  
 kinins and, 69
- Burkitt's lymphoma  
 Epstein-Barr virus and, 86

- T cell differentiation antigen
  - and, 198
  - untranslocated *myc* allele in, 42
- C
- Calcitriol
  - MHC class I antigens and, 365-66
- Calcium ionophores
  - lymphokine gene induction and, 445
- Calpains
  - kinins and, 64
- Cancer
  - MHC class I antigens and, 372-73
  - oncogenes and, 28-29
  - tumor-specific antigens and, 479-80
- Caprine arthritis encephalitis virus, 139
- envelope gene of, 141
- immune response to, 142-43
- Carboxypeptidase N
  - bradykinin and, 57
- Carcinogenesis
  - lymphotoxin and, 430
- Carcinogens
  - mutational effects of, 471-72
- Carcinoma
  - MHC class I antigens and, 372-73
  - nasopharyngeal
    - Epstein-Barr virus and, 86
  - neuroglular antigen and, 291
- Cardiac myxoma
  - B cell stimulatory factor-2 and, 501
- Castleman's disease
  - B cell stimulatory factor-2 and, 502
- Cathepsin D
  - leukokinins and, 64
- Cell adhesion
  - melanoma-associated gangliosides and, 288
- Cell death
  - immune system evolution and, 399-401
- Cellular adhesion molecule
  - melanoma-associated, 286-87
- Cellular cytotoxicity
  - antibody-dependent
    - IgG Fc receptors and, 254-55, 262-63
    - thioglycollate-elicited macrophages and, 266
- Cellular immunity
  - malaria vaccine and, 681-82
- Cellular protease
  - kinins and, 62-65
- Cervical cancer
  - B cell stimulatory factor-2 and, 501
- Chediak-Higashi syndrome
  - gene therapy and, 592
- Chemotaxis
  - opioid peptides and, 234-35
- Cholecystokinin
  - pancreatic kallikrein secretion and, 60
- Chondroitin sulfate proteoglycan
  - melanoma cells and, 285-86
- Choriocarcinoma
  - MHC class I antigens and, 372
- Chromosome 1
  - antithrombin III and, 602
- Chromosome 4
  - complement factor I gene and, 181
- Chromosome 5
  - deletions in
    - leukemia and, 456
- Chromosome 15
  - chondroitin sulfate proteoglycan gene and, 285
- Chromosome 17
  - nerve growth factor receptor and, 289
- Chronic granulomatous disease
  - gene therapy and, 592
- Cirrhosis
  - contact activation factors and, 71
- Clonal deletion
  - self-tolerance and, 115
- Clostridium tertium*
  - red cell I activity and, 8
- Coagulation factor XIa
  - antitrypsin and, 56
- Coagulation factor XII
  - See Hageman factor
- Coagulation proteases
  - complement component C1 inhibitor and, 606-7
- Collagenase gene
  - promoter region of
    - nuclear factors and, 448
- Collagen type IV
  - malignant melanocyte lesions and, 291
- Colony stimulating factor-1
  - interferon induction by, 441
- Colony stimulating factors
  - myeloid hemopoietic cell lineages and, 35
- Colorectal cancer
  - MHC class I antigens and, 372
- Complement
  - hereditary angioneurotic edema and, 612-13
  - phagocytosis and, 251
  - macrophage, 262
  - Complement component C1
    - activity of, 609-11
  - Complement component C1 complex, 166-67
  - Complement component C1 inhibitor, 166-67, 595-618
  - C1r/C1s and, 605-6
  - characterization of, 596-98
  - cloning and sequence analysis of, 598-602
  - coagulation/contact system
    - proteases and, 606-7
    - function of, 604-5
  - proteolytic systems and, 607-9
  - synthesis of, 602-4
  - Complement component C1 inhibitor deficiency
    - acquired, 617-18
  - Complement factor H, 181-82
  - Complement factor I, 179-81
  - Complement fixation
    - nonprecipitating antibodies and, 538
  - Complement receptors
    - phagocytic cells and, 251-52
  - Complement receptor type 1, 183-84
  - Complement receptor type 2, 85-107, 183-84
  - biologic functions of, 100-4
  - B cells and, 95-97
  - cDNA encoding
    - molecular cloning of, 98-100
  - distribution of, 94-95
  - Epstein-Barr virus receptor and, 87-94, 184
  - structure and antigenic expression of, 97-98
  - Complement receptor type 3, 186-87
  - Complement system
    - activation and control of, 162-65
    - antigen-antibody reactions and, 85
  - Complement system genes, 161-88
    - HLA class III, 167-79
  - Concanavalin A
    - IgG Fc receptors and, 261
  - Corticosteroids
    - immune thrombocytopenic purpura and, 261
  - Cryoglobulinemia
    - rheumatoid factors in, 345

- $\beta$ -Crystallin promoter/enhancer  
 SV40 T antigen and, 31  
 Cycloheximide  
   interferon mRNA and, 452  
 Cyclophosphamide  
   IgE response and, 515  
 Cyclosporine  
   opiate withdrawal syndrome and, 239  
 Cyclosporine A  
   lymphokine gene expression and, 446  
   lymphotoxin and, 430  
 Cytokine gene expression  
   regulation of, 439-57  
   posttranscriptional, 451-53  
   transcriptional, 440-51  
 Cytokine genes  
   dysregulation of, 453-57  
   recombinant DNA technology and, 439-40  
   T cell-derived, 445-50  
 Cytolytic T cells  
   lymphotoxin and, 421-22  
 Cytophilia  
   nonprecipitating antibodies and, 538  
 Cytotoxic T cells  
   B cell growth factor-II and, 497  
   complement receptor type 3 and, 186  
   inactivation of  
     veto cells and, 116-27  
   perforin and, 188  
   SV40 and, 362-63
- D**
- Danazol  
   hereditary angioneurotic edema and, 616  
   immune thrombocytopenic purpura and, 261  
 Demyelinating disease  
   human papovaviruses and, 32  
 Deoxycoformycin  
   adenosine deaminase and, 588  
   immune deficiency and, 585  
 Dermatitis  
   atopic  
     hyper-IgE syndrome and, 515  
   Dermatitis herpetiformis  
     HLA-B8/DRw3 haplotype in, 260  
   immune complex clearance in, 261  
 Dexamethasone  
   lymphokine gene expression and, 446
- Dextran sulfate  
   Hageman factor and, 51  
 Diabetes mellitus  
   type I  
     anti-idiotypic antibodies and, 343  
     autoantibodies and, 327  
 Diacylglycerol  
   glycosylation enhancing factor and, 525  
 Differentiation antigens  
   melanoma cells and, 292  
   Thy-1, 382  
 Disseminated intravascular coagulation  
   contact activation factors and, 70-71  
 DNA fragmentation  
   induction of  
     lymphotoxin and, 427-28  
 DNA microinjection  
   gene transfer by, 26-27  
 DNA sequencing  
   interferon genes and, 443  
 DNA viruses  
   gene transfer and, 581-82  
*Dolichus biflorus*  
   lectins of  
     site specificity of, 9
- E**
- Eccrine porocarcinoma  
   MHC class I antigens and, 372  
 Elastase/T antigen  
   SV40 T antigen and, 31-32  
 Encephalomyocarditis virus  
   lymphokines and, 421  
 Endoglycosidase F  
   IgG Fc receptors and, 254  
 $\beta$ -Endorphin  
   monocytes and, 234  
 Endotoxic shock  
   contact activation proteins and, 70  
 Endotoxin  
   interleukin-1 and, 450  
   lipid A component of  
     Hageman factor activation and, 70  
 Eosinophils  
   B cell growth factor-II and, 497  
   IgG Fc receptors on, 255  
 Epidermal growth factor  
   melanoma cells and, 289  
 Epidermoid cysts  
   MHC class I antigens and, 372  
 Epstein-Barr virus  
   lymphotoxin and, 416  
   pathogenicity of, 86-87  
 Epstein-Barr virus receptor  
   cDNA encoding  
     molecular cloning of, 98-100  
   complement receptor type 2 and, 87-94, 184  
   distribution of, 94-95  
 Equine infectious anemia virus  
   139-40  
   antigenic variation of, 140  
 Equine infectious anemia virus infection  
   antigenic variation during, 151-56  
   clinical course of, 150-51  
   immune responses during, 150-51  
 Erythema marginatum, 612  
 Erythrocytes  
   agglutination of  
     nonprecipitating antibodies and, 540-41  
   IgG-sensitized  
     immune complex disease and, 261  
 Erythroleukemia cells  
   mouse  
     myc expression in, 42  
*Evonymus europaeus*  
   lectins of, 10  
 Extracellular matrix proteins  
   melanoma cells and, 291
- F**
- Familial hypercholesterolemia  
   contact activation factors and, 71  
 Fatty acid metabolism  
   lymphotoxin and, 426-27  
 Fc receptor genes  
   cloning of, 271-73  
 Fc receptor molecules  
   soluble, 269-71  
 Fc receptors, 251-73  
   human, 252-63  
   murine, 263-69  
 Fibrinogen  
   high-molecular-weight kininogen and, 52-53  
 Fibroblast growth factor  
   melanoma cells and, 289  
 Fibroblasts  
   cytokines and, 439  
   interferon gene expression in, 441  
   lymphotoxin and, 416-17  
 Fibronectin  
   melanoma-associated gangliosides and, 288  
   melanoma cells and, 284, 291

- Fibrosarcoma  
ultraviolet radiation-induced  
MHC class I molecules in,  
366-67
- Fletcher trait, 51
- G
- Galactocerebroside  
melanoma cells and, 292
- Gamma globulin  
immune thrombocytopenic  
purpura and, 261
- Gammopathy  
monoclonal  
B cell stimulatory factor-2  
and, 502
- Gangliosides  
melanoma-associated, 284,  
287-89
- Gene expression  
cytokine  
regulation of, 439-57
- Gene therapy, 581-92  
adenosine deaminase de-  
ficiency and, 584-91  
immunodeficiency disease  
and, 591-92
- Genetic engineering  
antibodies and, 573
- Gene transfer  
methods of, 581-82
- $\alpha$ -Gladin  
leukocyte migration and, 235
- Glioblastoma cells  
interleukin-1 and, 493
- Glucocorticoids  
lymphokine gene expression  
and, 446  
metallothionein gene expres-  
sion and, 28
- Glycoproteins  
adhesive  
high-molecular-weight ki-  
ninogen and, 52-53
- Glycosylation enhancing factor,  
523-28
- Glycosylation inhibiting factor,  
523-28  
antigen-specific  
IgE antibody response and,  
528-29
- Gout  
contact activation system and,  
70
- Graft rejection  
lymphotoxin and, 430
- Graft-versus-host disease, 128
- Granulocyte/macrophage colony  
stimulating factor  
TH1-type T cell clones and,  
445
- TH2-type T cell clones and,  
446
- Granulocytes  
IgG Fc receptors on, 257  
opioid peptides and, 235-36
- Graves' disease  
anti-idiotypic antibodies and,  
343  
anti-TSH receptor auto-  
antibodies in, 335
- Growth factor receptors  
melanoma cells and, 289
- H
- Hageman factor  
cirrhosis and, 71  
endotoxin and, 70  
kinins and, 50-58  
quantitation of, 58
- Helix pomatia*  
lectins of, 9
- Hematopoiesis  
cytokines and, 439  
 $\gamma$ -interferon and, 453
- Hematopoietic cells  
B cell stimulatory factor-1  
and, 499  
B cell stimulatory factor-2  
and, 493
- Hematopoietic growth factor  
genes  
dysregulation of  
leukemogenesis and, 456-  
57  
transgenic, 35
- Hematopoietic growth factors  
T cells and, 449-50
- Hemolytic anemia  
autoimmune  
autoantibodies and, 327
- Heparin  
Hageman factor and, 51
- Hepatocytes  
B cell stimulatory factor-2  
and, 493
- Hereditary angioedema  
kinins and, 69-70
- Hereditary angioneurotic edema,  
611-617
- Herpes simplex virus-2  
lymphokines and, 421  
lymphotoxin induction and,  
416
- Herpes simplex viruses  
MHC class I antigens and,  
371
- Herpes simplex virus thymidine  
kinase  
gene for, 444
- Histamine  
kinin generation and, 65
- release of  
complement and, 85
- Histaminuria  
hereditary angioneurotic ede-  
ma and, 616
- Human immunodeficiency virus,  
140  
trans-acting factors of  
lymphotoxin induction and,  
416
- Human papovaviruses  
SV40 T antigen and, 32
- Human T cell lymphotropic  
virus type-1  
adult T cell leukemia and,  
453-56  
interleukin-2 gene and, 449  
lymphotoxin and, 416
- Hybridoma  
B cell stimulatory factor-2  
and, 490-92
- T cell  
lymphotoxin and, 415
- Hypercholesterolemia  
familial  
contact activation factors  
and, 71
- Hypergammaglobulinemia  
autoimmune disease and, 329
- B cell stimulatory factor-2  
and, 502
- Hyper-IgE syndrome, 515
- Hyperlipidemia  
type II  
contact activation factors  
and, 71
- Hypersensitivity  
delayed-type  
lymphotoxin and, 407  
immediate-type  
B cell stimulatory factor-1  
and, 502-3
- Hypogammaglobulinemia  
severe combined immune de-  
ficiency and, 586
- I
- Idiopathic thrombocytopenic  
purpura  
autoantibodies and, 327
- Idiotypes  
conformation of, 572
- IgE  
B cell stimulatory factor-1  
and, 502-3
- IgE-binding factors, 513-30  
B cell-derived, 519-22  
biologic activities of  
IgE response and, 514-15  
carbohydrate moieties in, 518-  
19

- formation of, 522-28  
properties and structure of, 515-18
- IgE response  
IgE-binding factors and, 514-15  
suppression of, 528-29
- IgG  
Fc receptors for, 251-73  
human, 252-63  
murine, 263-69  
phagocytosis and, 251
- Immune complex disease  
IgG-sensitized erythrocytes and, 261
- Immune complexes  
arachidonic acid release and, 267-68  
IgG Fc receptors and, 258-59
- Immune response  
caprine arthritis encephalitis virus and, 142-43  
equine infectious anemia virus and, 150-51  
IgE-binding factors and, 514
- Immune system  
melanoma-associated gangliosides and, 288-89  
opioid receptors in, 219-44  
vertebrate  
evolution of, 399-401
- Immune thrombocytopenic purpura  
platelet-associated immunoglobulin and, 261
- Immunity  
cytokines and, 439
- Immunodeficiency disease  
gene therapy for, 581-92
- Immunodiagnosis  
melanoma antigens and, 295-97
- Immunogenicity, 570
- Immunoglobulin  
induction in B cells  
B cell growth factor and, 487  
platelet-associated  
immune thrombocytopenic purpura and, 261
- Immunoglobulin binding factor  
murine T cells and, 269-70
- Immunoglobulin chains  
sequences of, 16-18
- Immunoglobulin E  
See IgE
- Immunoglobulin G  
See IgG
- Immunoglobulin superfamily, 381-401, 557-58  
evolution of, 397-401  
fold and sequence patterns in, 385-90
- alignments of, 388-89  
genes for  
exons encoding, 396  
genetic linkage in, 394-97  
molecular characteristics of, 393-94  
molecules of, 384-85  
functions of, 386, 397  
inclusion criteria for, 390-93  
models for, 382-83
- Immunoregulation  
lymphotoxin and, 429
- Immunotherapy  
malignant melanoma and, 297-98
- Indomethacin  
MHC class I antigens and, 365
- Infectious disease  
lymphotoxin and, 429
- Infectious mononucleosis  
Epstein-Barr virus and, 86
- Inflammation  
cytokines and, 439  
IgG Fc receptors and, 251  
kinins and, 65-71
- Influenza virus  
antigenic variation of, 140
- Influenza virus infection  
autoantibodies in, 347
- Insulin/insulin-like growth factor  
melanoma cells and, 289
- Insulinoma  
human papovaviruses and, 32
- Insulin/T antigen  
SV40 T antigen and, 31
- Interferon  
Kawasaki syndrome and, 453  
lymphotoxin and, 418  
MHC class I antigens and, 364-65
- Interferon genes  
cloning of, 408-9  
DNA sequences of, 443  
virus-inducible, 440-45
- $\beta$ -Interferon gene  
induction of, 452-53
- $\gamma$ -Interferon  
aplastic anemia and, 453  
IgE and, 503  
IgE-binding factors and, 522  
IgG Fc receptors and, 254-55  
interleukin-1 production and, 450  
lymphotoxin induction and, 415  
mRNA for, 446  
polymorphonuclear leukocytes and, 420  
T cells and, 310, 449  
TH1-type T cell clones and, 445
- $\gamma$ -Interferon gene  
regulatory DNA sequences for, 448-49
- Interleukin-1  
B cell stimulatory factor-2 and, 493  
interferon induction by, 441  
Kawasaki syndrome and, 453  
production of  
induction of, 450
- Interleukin-1 gene  
cloning of, 408-9
- Interleukin-2  
lymphotoxin induction and, 415  
mRNA for, 446  
T cell neoplasms and, 453-56  
T cells and, 310, 449  
TH1-type T cell clones and, 445  
thymocytes and, 314
- Interleukin-2 gene  
basic promoter sequence of, 448  
human T cell lymphotropic virus type I and, 449
- Interleukin-3  
TH1-type T cell clones and, 445  
TH2-type T cell clones and, 445-46
- Interleukin-3 gene  
T cells and, 450
- Interleukin-4, 494-96  
cDNA for, 496  
IgE-binding factors and, 522  
immediate-type hypersensitivity and, 502-3  
T cells and, 310  
TH2-type T cell clones and, 446
- Interleukin-4 receptor, 499-500
- Interleukin-5, 496-98
- Interleukin-6  
autoimmune disease and, 501-2  
B cell differentiation and, 486-88
- Interleukin-6 gene  
induction of, 444
- K
- Kallikrein  
complement component C1 inhibitor and, 606-7  
disseminated intravascular coagulation and, 71  
glycosylation enhancing factor activity and, 524  
Hageman factor and, 53  
plasma  
cirrhosis and, 71

- prokallikrein activation and, 62  
   rheumatoid arthritis and, 70  
   tissue  
     kinins and, 59-62  
 Kawasaki syndrome  
   cytokines and, 453  
 Keratinocytes  
   cytokines and, 439  
   mouse  
     *myc* expression in, 42  
 Keratocanthoma  
   MHC class I antigens and, 372  
 Kininogen, 49  
   high-molecular-weight  
     bradykinin formation and, 50  
     cirrhosis and, 71  
     fibrinogen and, 52-53  
     hereditary angioedema and, 70  
     kallikrein inactivation and, 607  
     prekallikrein and, 55  
     quantitation of, 58  
     tissue kallikreins and, 61  
 Kininogenase, 49, 63  
 Kinins, 49-71  
   asthma and, 69  
   formation of  
     cellular proteases and, 62-64  
     Hageman factor dependent pathway and, 50-58  
     tissue kallikreins and, 59-62  
   hereditary angioedema and, 69-70  
   inflammatory disorders and, 65-71  
   rhinitis and, 65-68
- L**
- Laminin  
   malignant melanocyte lesions and, 291  
 Lectins, 9-10  
   lymphokine gene induction and, 445  
   thymocytes and, 314  
 Lentiviral disease  
   antigenic variation in, 139-56  
 Lentiviruses, 141-42  
 Leprosy  
   autoantibodies in, 347  
 Leukemia  
   acute lymphocytic  
     deoxycytosine and, 585  
   acute nonlymphocytic  
     chromosome 5 and, 456  
   adult T cell  
     human T cell lymphotropic virus type-1 and, 453-56  
   MHC class I molecules and, 367-68  
   T cell differentiation antigen and, 197-98  
 Leukemogenesis  
   cytokine gene dysregulation in, 453-57  
   hematopoietic growth factor gene dysregulation and, 456-57  
 Leukocytes  
   growth and mobility of, 439  
   interferon gene expression in, 441  
   migration of  
     complement and, 85  
 Leukokins, 64-65  
 Leukoregulin, 408-9  
 Leukotrienes  
   kinin generation and, 65  
 LFA-1 deficiency  
   gene therapy and, 592  
 Lipocortin  
   IgE-SF and, 524  
 Lung cancer  
   MHC class I antigens and, 372-73  
 Lymphocytes  
   leukocyte growth and mobility and, 439  
   neuroleukin and, 493-94  
   See also B cells; T cells  
 Lymphoid neoplasia  
   *c-myc* deregulation and, 38-43  
 Lymphokine genes  
   dysregulation of, 453-57  
   T cell-derived, 445-50  
 Lymphokines  
   IgE-binding factors and, 522-25  
   lymphotoxin induction and, 414  
   phagocytosis and, 262  
   thymocytes and, 314  
   T cells and, 310  
 Lymphoma  
   Burkitt's  
     Epstein-Barr virus and, 86  
     T cell differentiation antigen and, 198  
     untranslocated *myc* allele in, 42  
   mouse Ly-1 B, 209-10  
   non-Hodgkin's  
     interleukin-2 autocrine mechanism and, 456  
   rheumatoid factor paraproteins in, 205  
   severe combined immune deficiency and, 585  
 Lymphoproliferative syndrome  
   X-linked  
     Epstein-Barr virus and, 87  
 Lymphotoxin, 407-31  
   biologic activities of, 416-21, 428-31  
   cells of origin, 414-16  
   cytolytic T cell killing and, 421-22  
   induction of, 416  
   mechanism of, 422-28  
   protein structure of, 409-12  
 Lymphotoxin gene  
   organization and linkage of, 412-14  
 Lysozyme-Fab complexes, 567-69  
   three-dimensional structure of, 561-65  
 Lysylbradykinin, 49  
   rhinitis and, 65-67
- M**
- alpha-2-Macroglobulin  
   plasmin and, 608-9  
 Macrophages  
   cytokines and, 439  
   IgG Fc receptors on, 252, 257-59  
   immune complex-stimulated arachidonic acid and, 267-68  
   lymphotoxin and, 415  
   opioid peptides and, 235-36  
   phagocytosis by  
     complement and, 262  
   thioglycollate-elicited  
     antibody-dependent cellular cytotoxicity and, 266  
 Major histocompatibility complex  
   class II  
     B cell stimulatory factor-1 and, 495  
   T cells and, 310, 360-62, 629-30  
 Major histocompatibility complex antigens  
   class I, 359-74  
   experimental tumors and, 371-72  
   expression of, 363-66  
   human tumors and, 372-73  
   lymphotoxin and, 419-20  
   tumor cells and, 362-63, 366-71  
   class II  
     lymphotoxin and, 420  
     T cells and, 381-82

- Malaria sporozoites  
CS protein of, 665-67  
T cell epitopes of, 669-78  
immunity to  
mechanisms of, 667-69
- Malaria vaccine, 663-83
- Malignancy  
oncogenes and, 28-29  
tumor-specific antigens and,  
471-72
- Malignant melanoma  
immunodiagnosis of, 295-97  
immunotherapy of, 297-98  
MHC class I antigens and,  
372  
progression of, 283-84
- Mammary cancer  
MHC class I antigens and,  
372
- Mast cell growth factor-2, 496
- Mast cells  
histamine release from  
complement and, 85  
opioid peptides and, 236
- Measles virus  
antigenic variation of, 140
- Melanocytic nevus  
malignant melanoma and,  
283
- Melanoma  
malignant  
immunodiagnosis of, 295-97  
immunotherapy of, 297-98  
progression of, 283-84  
MHC class I antigens and,  
372
- Melanoma antigens, 283-300  
immunodiagnosis and, 295-97  
immunologic/biologic  
characterization of, 284-92  
melanoma immunotherapy  
and, 297-98
- Melanoma cells  
antigen expression on, 292-95  
binding proteins and, 289-90  
class II HLA antigens and,  
290-91  
differentiation antigens and,  
292  
extracellular matrix proteins  
and, 291  
gangliosides and, 284, 287-89  
growth factors and, 289  
neuroglanular antigen and,  
291  
oncofetal proteins and, 285-87  
pigmentation-associated anti-  
gens and, 291
- Melanotransferrin  
melanoma cells and, 289-90
- Meningitis  
group B meningococcal, 13
- Mesothelioma  
MHC class I antigens and,  
372
- Metallothionein enhancer  
SV40 T antigen and, 31
- Metallothionein gene expression  
regulator for, 28
- Metallothionein IIA gene  
promoter region of  
nuclear factors and, 448
- Metastasis  
malignant melanoma and,  
283-84
- Metenkephalin  
monocytes and, 234
- Methyltestosterone  
hereditary angioneurotic ede-  
ma and, 616
- Methyltransferases  
glycosylation enhancing factor  
and, 525
- Mice  
motheaten, 203, 209  
NFS  
B lymphomas from, 205-6  
nude, 203  
NZB, 203-4, 209  
transgenic  
cytoplasmic cellular  
oncogenes and, 33-35  
nuclear cellular oncogenes  
and, 36-43  
oncogene cooperativity and,  
43-44  
oncogenesis and, 25-45  
production of, 26-28  
viral oncogenes and, 29-33  
*xid*, 203
- Mineralocorticoids  
renal kallikrein secretion and,  
60
- Mitogens  
T cell  
lymphotoxin induction and,  
414
- Monoclonal antibodies  
autoimmune thyroiditis and,  
329  
human, 11-13  
IgG Fc receptors and, 251  
human, 252-53, 257-59  
melanoma antigens and, 284  
melanoma immunodiagnosis  
and, 295-97  
melanoma immunotherapy  
and, 297-98  
tumor-specific, 473-74
- Monoclonal gammopathy  
B cell stimulatory factor-2  
and, 502
- Monocytes  
C3d-binding molecule of, 94  
IgG Fc receptors on, 252,  
255, 257  
interferon gene expression in,  
441  
monokines and, 439  
opioid peptides and, 234-35  
tumor necrosis factor gene  
and, 451
- Monokines, 439
- Mosaicism, 26
- Multiple sclerosis  
diagnosis of, 5  
myelin basic protein and, 430
- Myasthenia gravis  
autoantibodies and, 327, 345
- Mycobacterium tuberculosis*  
inactivated  
caprine arthritis encephalitis  
virus and, 142-43
- Myelin-associated glycoprotein  
melanoma cells and, 292
- Myelin basic protein  
multiple sclerosis and, 430
- Myelodysplastic syndrome  
chromosome 5 and, 456
- Myeloma polyneuropathy  
autoantibodies and, 327
- N
- Naloxone  
leukocyte migration and, 235  
opioid receptors and, 232-34
- Nasopharyngeal carcinoma  
Epstein-Barr virus and, 86
- Natural killer cells  
IgG Fc receptors on, 257  
opioid peptides and, 237-38
- Natural killer cytotoxic factor,  
409
- Neoplasms  
T cell  
interleukin-2 and, 453-56
- Nephrotic syndrome  
contact activation factors and,  
71
- Nerve cells  
B cell stimulatory factor-2  
and, 493  
neuroleukin and, 493-94
- Nerve growth factor  
melanoma cells and, 289
- Neuraminidase-Fab complex,  
566-67
- Neuroblastoma  
MHC class I antigens and,  
372-73
- Neuroglanular antigen  
highly glycosylated  
melanoma cells and, 291



- Neuroleukin, 493-94  
 Neutropenia  
   autoimmune  
     NA1/NA2-specific antibody and, 258  
 Neutrophils  
   C3d-binding molecule of, 94  
   IgG Fc receptors on, 255, 257  
    $\gamma$ -interferon and, 255  
   leukokins and, 64  
 N-methyl-N'-  
   Nitronitrosoguanidine  
   MHC class I antigens and, 366
- O**  
 Oligosaccharide receptors  
   phagocytic cells and, 251-52  
 Oligosaccharides  
   isolation of, 6-8  
 Oncofetal proteins  
   melanoma-associated, 285-87  
 Oncogenes  
   cooperativity of, 43-44  
   cytoplasmic cellular, 33-35  
   malignancy and, 28-29  
   nuclear cellular, 36-43  
   transgenic, 25  
   viral, 29-33  
 Oncogenesis  
   radiation leukemia virus-induced  
     resistance to, 368-69  
     transgenic mice and, 25-45  
   opiate withdrawal syndrome  
     cyclosporine and, 239  
 Opioid agonists  
   potencies of, 225  
 Opioid peptides  
   activity of  
     functional assays of, 225-40  
     production of, 240-43  
 Opioid receptors  
   binding to, 221-25  
   immune system and, 219-44  
 Oposonization  
   nonprecipitating antibodies and, 538  
 Oral contraceptives  
   complement component C1 inhibitor and, 612  
 Osteoarthritis  
   B cell stimulatory factor-2 and, 501  
 Osteoclasts  
   activation of  
     lymphotoxin and, 421  
 Osteolysis  
   lymphotoxin and, 421
- Osteosarcoma  
   human papovaviruses and, 32
- P**  
 Pain  
   kinins and, 49  
 Parasites  
   lymphotoxin and, 429  
   persistence of  
     antigenic drift and, 140  
 Passive cutaneous anaphylaxis  
   nonprecipitating antibodies and, 539  
 Pemphigus vulgaris  
   autoantibodies and, 327  
 Perforin  
   cytotoxic T cells and, 188  
 Phagocytosis  
   complement and, 85  
   lymphokines and, 262  
   nonprecipitating antibodies and, 538  
   triggering of, 251  
 Phorbol ester  
   lymphotoxin induction and, 414  
 Phospholipase C  
   glycosylation enhancing factor and, 525  
 Pigmentation-associated antigens  
   melanoma cells and, 291  
 Pilar cysts  
   MHC class I antigens and, 372  
 Placental membrane antigen  
   melanoma cells and, 287  
 Plasmacytoma  
   B cell stimulatory factor-2 and, 490-92, 502  
   transgenic mice and, 39-40  
   untranslocated myc allele in, 42  
 Plasma kallikrein  
   cirrhosis and, 71  
   prokallikrein activation and, 62  
   rheumatoid arthritis and, 70  
 Plasmin  
   antiplasmin and, 56  
   complement component C1 inhibitor and, 608-9  
   Hageman factor and, 53-54  
   prokallikrein activation and, 62  
 Plasminogen  
   kringle structure of, 54  
 Plasmodia  
   persistence of  
     antigenic drift and, 140  
   *Plasmodium berghei*  
     sporozoites of  
       CS protein of, 665-67  
   *Plasmodium falciparum*  
     hepatic schizogony and, 664  
 Platelet-derived growth factor  
   interferon induction by, 441  
 melanoma cells and, 289  
 Platelets  
   complement receptor type 2 and, 95  
   IgG Fc receptors on, 255  
 Pneumonitis  
   kinins and, 69  
 Polycythemia vera  
   contact activation factors and, 71  
 Polymorphonuclear leukocytes  
   lymphokines and, 420  
 Polyneuropathy  
   myeloma  
     autoantibodies and, 327  
 Prekallikrein  
   bradykinin formation and, 50  
   disseminated intravascular coagulation and, 71  
   high-molecular-weight kininogen and, 55  
   quantitation of, 58  
   typhoid fever and, 70  
 Prekallikrein activator, 63  
 Prekallikrein deficiency  
   congenital, 51  
 Primary aldosteronism  
   renal kallikrein secretion and, 60  
 Procollagenase  
   plasma kallikrein and, 70  
 Prokallikrein  
   activation of, 62  
 Prostaglandin D2  
   kinin generation and, 65  
 Prostaglandins  
   MHC class I antigens and, 365  
 Protease  
   cellular  
     kinins and, 62-65  
   V-8  
     complement receptor 2 and, 89  
 Protein kinase C  
   antigen receptors and, 500  
   tissue plasminogen activator and, 445  
 Proteins  
   antigenic sites on, 571-72  
   extracellular matrix  
     melanoma cells and, 291  
   oncofetal  
     melanoma-associated, 285-87

- Protein synthesis  
  lymphotoxin and, 426
- Prothrombin  
  kringle structure of, 54
- Proto-oncogenes  
  *c-fos*, 36-37  
  *c-myc*, 37-43  
  *ras*, 33-35
- Protozoans  
  persistence of  
    antigenic drift and, 140
- Pseudogout  
  contact activation system and, 70
- Purine nucleoside phosphorylase  
  deficiency  
  gene therapy and, 591-92
- R**
- Rabies virus  
  antigenic variation of, 140
- Radiation leukemia virus-  
  transformed cells  
  major histocompatibility complex and, 368-69
- Radioligands  
  opioid, 221-22
- Recombinant DNA technology  
  antibodies and, 573  
  cytokine genes and, 439-40
- Reovirus infection  
  autoantibodies in, 347
- Reticular dysgenesis  
  gene therapy and, 592
- Retroviruses  
  gene transfer and, 27-28, 581-84
- Retrovirus infection  
  autoantibodies in, 347
- Rheumatic fever  
  autoantibodies in, 346
- Rheumatoid arthritis  
  anti-collagen antibodies and, 345  
  B cell stimulatory factor-2 and, 501-2  
  cytokines and, 453  
  Leu-1 expressing B cells and, 205  
  plasma kallikrein and, 70
- Rhinitis  
  kinins and, 65-68
- RNA viruses  
  gene transfer and, 581-82
- Rocky Mountain spotted fever  
  contact activation factors and, 71
- Rubella  
  autoantibodies in, 347
- S**
- Sarcoma  
  methylcholanthrene-induced  
  tumor antigens on, 475-76  
  tumor necrosis factor and, 419
- Schistosoma mansoni*  
  IgG-dependent killing of  
  complement and, 262  
  lymphotoxin and, 429
- Schizophrenia  
  HLA antigens and, 239
- Seborrheic warts  
  MHC class I antigens and, 372
- Self-antigens  
  autoantibodies binding to, 350-52  
  autoimmune disease and, 343-45
- Self-tolerance  
  mechanisms of, 327-29, 341  
  veto cells and, 115-16
- Sendai virus  
  tumor necrosis factor and, 416
- Sendai virus infection  
  autoantibodies in, 347
- Serotonin  
  release of  
  opioid peptides and, 236
- Serpins  
  function of, 604  
  sequence homology of, 598-99
- Severe combined immune deficiency, 581, 584-87
- Silica  
  interleukin-1 production and, 450
- Simian immunodeficiency virus, 140
- Sjogren's syndrome  
  autoanti-RNA antibodies in, 345  
  immune complex clearance in, 261  
  Leu-1 expressing B cells and, 205
- Skin tumor 1591  
  ultraviolet light-induced  
  tumor-specific antigens and, 476-79
- Sodium  
  dietary  
  renal kallikrein secretion and, 60
- Sodium butyrate  
  MHC class I antigens and, 365-66
- S-100 protein  
  calcium-binding  
  melanoma cells and, 290
- S protein  
  complement component C5b-9 and, 187
- Squamous cell carcinoma  
  MHC class I antigens and, 372
- Staphylococcus*  
  phagocytosis and, 251
- Sulfatides  
  Hageman factor and, 51
- Suppressor T cells  
  self-tolerance and, 328, 341
- Surface markers  
  thymocytes and, 313  
  T cells and, 309-10
- SV40  
  cytotoxic T cells and, 362-63  
  gene transfer and, 581
- SV40 T antigen  
  oncogenic potential of, 29-30  
  tissue-specific regulators of, 31-32
- Syphilis  
  autoantibodies in, 347
- Systemic lupus erythematosus  
  immune complex clearance in, 261  
  lymphotoxin and, 430
- T**
- T antigen  
  SV40  
    oncogenic potential of, 29-30  
    tissue-specific regulators of, 31-32
- T cell growth factor-2, 496
- T cell neoplasms  
  interleukin-2 and, 453-56
- T cell receptor/CD3 complex, 629-56  
  biosynthesis and assembly of, 640-45  
  signal transduction and, 645-49  
  structure of, 631-40
- T cell receptor/CD3 complex  
  genes  
  structure and regulation of, 650-55
- T cells  
  accessory molecules and, 311-12  
  antigen receptors on, 311-12  
  allelic exclusion of, 312-13  
  intrathymic acquisition of, 318

- antigen-specific  
  IgE-binding factors and, 525-28  
B cell growth factor-II and, 497  
B cell stimulatory factor-I and, 499  
cytokine genes and, 445-50  
cytolytic  
  lymphotoxin and, 421-22  
cytotoxic  
  complement receptor type 3 and, 186  
  SV40 and, 362-63  
  veto cells and, 116-27  
cytotoxic perforin and, 188  
development of, 309-21  
  model of, 320-21  
  helper/inducer lymphokines and, 445  
  hematopoietic growth factors and, 449-50  
  hyper-IgE syndrome and, 515  
immunoglobulin binding factor and, 269-70  
interleukin-3 gene in, 450  
lymphokine induction in, 449  
lymphotoxin and, 414-15  
major histocompatibility complex and, 310, 360-62, 381-82  
malaria circumsporozoite protein and, 663-83  
neuroleukin and, 494  
opioid peptides and, 237-38  
severe combined immune deficiency and, 585-86  
subsets of  
  function and specificity of, 310-11  
  surface markers defining, 309-10  
suppressor  
  self-tolerance and, 328, 341  
tumor necrosis factor gene and, 451  
Testosterone  
  hereditary angioneurotic edema and, 616  
  tissue kallikrein and, 60  
Thymic migrants, 314-15  
Thymocytes, 313-15  
  differentiation of  
    tumor model of, 318-19  
  precursors of, 315-18  
  selection of  
    antigen specificity and, 319-20  
  subsets of  
    functional potential of, 313-14  
  surface markers defining, 313  
Thymoma  
  allospecificity in, 366  
Thyroiditis  
  autoimmune  
    autoantibodies and, 327  
    monoclonal antibodies and, 329  
Thyroxine  
  tissue kallikrein and, 60  
Tissue kallikrein  
  kinins and, 59-62  
Tissue plasminogen activator  
  disulfide bridge of, 179  
  interleukin-1 production and, 450  
  kringle structure of, 54  
  lymphokine gene induction and, 445  
*Toxoplasma gondii*  
  IgG-sensitized  
    phagocytosis of, 267  
Transcription  
  interferon gene induction and, 441  
Transforming growth factor  
  melanoma cells and, 289  
Transgenic mice  
  cytoplasmic cellular oncogenes and, 33-35  
  nuclear cellular oncogenes and, 36-43  
  oncogene cooperativity and, 43-44  
  oncogenesis and, 25-45  
  production of, 26-28  
  viral oncogenes and, 29-33  
Trypanosomes  
  persistence of  
    antigenic drift and, 140  
Trypsin  
  complement receptor type 2 and, 89  
  glycosylation enhancing factor activity and, 524  
  Hageman factor and, 54  
  IgG Fc receptors and, 254  
  prokallikrein activation and, 62  
Tryptase  
  mast cell kininogenase and, 63  
Tumor cells  
  MHC class I antigens and, 362-63, 366-71  
Tumor immunity  
  lymphotoxin and, 430  
Tumor necrosis factor  
  antiviral effects of, 421  
  cell growth stimulation by, 419  
DNA fragmentation and, 427-28  
induction of, 416  
interleukin-1 production and, 450  
methylocholanthrene-induced sarcoma and, 419  
MHC class I antigens and, 365  
polymorphonuclear leukocytes and, 420  
protein synthesis and, 426  
Tumor necrosis factor gene  
  cloning of, 408-9  
  induction of, 444, 451  
Tumors  
  experimental  
    immunomodulation of, 371-72  
  Tumor-specific antigens, 465-80  
    diversity of, 467-71  
    human tumors and, 479-80  
    malignancy and, 471-72  
    methylocholanthrene-induced sarcoma and, 475-76  
    ultraviolet light-induced skin tumor 1591 and, 476-79  
    in vitro probes and, 472-74  
Tunicamycin  
  IgE-binding factors and, 518-19  
Typhoid fever  
  prekallikrein depletion and, 70  
U  
Urokinase  
  disulfide bridge of, 179  
  Hageman factor and, 54  
  kringle structure of, 54  
V  
Vaccinia virus infection  
  autoantibodies in, 347  
Vasodilatation  
  kinins and, 49  
Vesicular stomatitis virus  
  lymphokines and, 421  
  lymphotoxin induction and, 416  
  MHC class I antigens and, 371  
Veto cells, 115-34  
  allograft tolerance and, 127-30  
  cytotoxic T cell inactivation and, 116-27  
  function in vitro, 120-21

- function in vivo, 124-26
  - intrathymic tolerance and, 132-33
  - T helper cell tolerance and, 131-32
  - Vicia villosa*
    - lectins of, 10
  - Viral infection
    - cytokines and, 439
  - Viral oncogenes, 29-33
  - Viruses
    - antigenic variation of, 140
    - gene transfer and, 581-82
    - interferon genes and, 440-45
    - lymphotoxin and, 414, 421
    - tumor necrosis factor and, 421
  - Visna virus, 139
    - antigenic variants of
      - molecular studies of, 144-50
    - antigenic variation of, 140
    - persistent infection and, 143-44
    - envelope gene of, 141
  - Vitronectin, 187
- W**
- Waldenstrom's macroglobulinemia
    - rheumatoid factor paraproteins in, 205
  - Wistaria floribunda*
    - lectins of, 10
- X**
- X-ray irradiation
    - IgE response and, 515

